REMARKS

Claims 1-12 are pending in the application. Claims 1 and 8 have been amended to indicate that component C) comprises isophorone diisocyanate. Support for the amendment can be found at page 8, lines 15-17 of the specification.

Rejections under 35 U.S.C. §103(a)

Claims 1-12 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. No. 4,079,028 to Emmons et al. (hereinafter "Emmons"). The Examiner maintains the rejection, indicating that it would have been obvious to a skilled artisan would have been expected to pick and choose from the disclosure of Emmons to arrive at the claimed combination of ingredients.

The present invention is directed to a water-soluble or water-dispersible polyurethane that includes the reaction product of a mixture of at least one polyether polyol and at least one urethane group-containing polyether polyol, at least one C_8-C_{22} monoisocyanate, at least one (cyclo)aliphatic and/or aromatic diisocyanate that includes isophorone diisocyanate, optionally at least one C_8-C_{22} monoalcohol, and optionally at least one polyisocyanate having an average functionality of > 2. The polyether polyol has an average functionality of ≥ 3. The urethane group-containing polyether polyol has an average functionality of ≥ 4. The starting NCO/OH equivalent ratio is between 0.5:1 to 1.2:1. The polyurethane has a softening point of from 10°C to 80°C.

Emmons discloses latex and other aqueous systems thickened by incorporation of a low molecular weight polyurethane characterized by at least three hydrophobic groups interconnected by hydrophilic polyether groups. The thickeners are prepared at 60°C in a solvent (toluene). At the end of the reaction, the product is isolated by evaporation.

Emmons discloses polymeric compounds in which the isocyanate-reactive component is used at an equivalent stoichiometric amount or at a stoichiometric excess. On the other hand, in the present invention a slight excess of isocyanate is always used, which is eliminated at the end of the preparation (see the examples in the specification).

Also, Emmons does not disclose or in any way suggest using isophorone diisocyanate (IPDI) as is required in the amended claims. Emmons only provides a general disclosure of organic polyisocyanates and a laundry list that does not include IPDI.

However, "a 'laundry list' disclosure of every possible moiety does not constitute a written description of every species in a genus because it would not 'reasonably lead those skilled in the art to any particular species." MPEP § 2163 quoting Fujikawa v. Wattanasin, 93 F.3d 1559, 1571 (Fed. Cir. 1996).

IPDI is essential to the present invention to provide positive rheological properties (see examples 2, 3, 5, and 6 on pages 12-13 of the specification).

For the reasons cited above, Claims 1-12 are not obvious over Emmons and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Claims 1-12 stand rejected under 35 U.S.C. §103(a) as being obvious over WO 96/30425 in the name of Martz et al. (hereinafter "Martz"). As in the previous section, the Examiner asserts that the small amount of picking and choosing leads to the claimed choices of reactants, rendering the claims obvious.

Martz discloses an aqueous two-component polyisocyanate coating composition based on an isocyanate-free emulsifier. The emulsifier includes the reaction product of an isocyanate and a compound selected from hydroxy functional polyalkyl ethers and amine compounds.

Martz does not disclose including the urethane group-containing polyol a2) having an average functionality of ≥ 4 in the disclosed emulsifier. However, the Examiner predicts that such a species will form during the process disclosed by Martz. The Examiner has also made this assertion with regard to Emmons. In the Amendment filed November 26, 2002, Applicants requested that the Examiner provide authority for this assertion, which the Examiner has not done.

The Examiner has not explained how polyols having a functionality of 3 or less can multiply to 4 or more. Surely reaction of two or more isocyanate groups in the polyisocyanates used in Martz or Emmons can react with two or more hydroxyl groups on the same polyol. This would of course result in less functionality, not more. On what basis can the Examiner assert that one pathway is more favorable than another?

As stated in MPEP §2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed Cir 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed Cir. 1992).

Clearly, there is no such teaching, suggestion or motivation shown in Martz or Emmons. If the Examiner is relying on knowledge generally available to one of ordinary skill in the art, MPEP §2144.03 states that if Applicants traverse such an assertion, the Examiner should cite a reference in support of his position. Applicants do traverse the Examiner's assertion in this case and hereby request such a reference.

Applicants sought to provide improved thickening agents for aqueous systems for use in the low-shear range. The object was achieved by the hydrophilic/hydrophobic water-soluble or water-dispersible polyurethanes according to the invention, an essential feature of which is the use of urethane group-containing polyether polyols having an average functionality of ≥ 4. Applicants' object was achieved by including the urethane polyether component, not by leaving to chance what might occur during a synthetic procedure.

There is no disclosure in Martz or Emmons that remotely suggests achieving the object of the invention by way of the specifically included urethane group-containing polyether polyols having an average functionality of ≥ 4. If the Examiner is relying on facts within his personal knowledge, Applicants respectfully request and are calling for, pursuant to MPEP §2144.03 and 37 C.F.R. §1.104, the Examiner to support such facts by an Affidavit.

Therefore, Applicants contend that nothing in the teaching of Martz or Emmons would lead one of ordinary skill to the instantly claimed invention and respectfully request the Examiner reconsider and withdraw the rejection of Claims 1-12 under 35 U.S.C. §103(a) as being unpatentable over Martz or Emmons.

Rejections under obviousness-type double patenting

Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-16 of copending application SN 10/091,960.

Applicants request the Examiner hold this rejection in abeyance until such time as Claims 1-16 of copending application SN 10/091,960 are issued in a patent or the present claims are allowed.

CONCLUSION

Applicants submit that the instant application is in condition for allowance. Accordingly, reconsideration and a Notice of Allowance are respectfully requested for Claims 1-12. If the Examiner is of the opinion that the instant application is in condition for other than allowance, he is requested to contact the Applicants' agent at the telephone number given below so that additional changes to the claims may be discussed.

Respectfully submitted,

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